

Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A polymer electrolyte composite membrane comprising a porous base material having fine pores which are filled with a polymer electrolyte comprising a hydrophobic moiety and a hydrophilic moiety.

wherein each phase of the hydrophobic and a hydrophilic moieties of the polymer electrolyte satisfy the following formula (1)

$$a \pm b \leq d \quad (1)$$

(wherein a represents the size (nm) of a hydrophobic domain, b represents the size (nm) of a hydrophilic domain, and d represents the average pore diameter (nm) of fine pores of the porous base material).

2. (Original) The polymer electrolyte composite membrane according to claim 1, wherein the formula (1) is $a \pm b \leq d/2$.

3. (Original) The polymer electrolyte composite membrane according to claim 1, wherein a value of $a+b$ is equal to or more than 3 nanometers.

4. (Original) The polymer electrolyte composite membrane according to claim 1, wherein a value of $a \pm b$ is equal to or more than 10 nanometers.

5. (Previously Presented) The polymer electrolyte composite membrane according to claim 1, wherein a value of $a+b$ is equal to or less than 200 nanometers.

6. (Previously Presented) The polymer electrolyte composite membrane according to claim 1, wherein a value of $a+b$ is equal to or less than 100 nanometers.

7. (Previously Presented) The polymer electrolyte composite membrane according to claim 6, wherein a hydrophilic repeating unit has an ion-exchange group.

8. (Previously Presented) The polymer electrolyte composite membrane according to claim 7, wherein an ion-exchange group is cation-exchange group or anion-exchange group.

9. (Previously Presented) The polymer electrolyte composite membrane according to claim 8, wherein a cation-exchange group is at least one selected from a group consisting of $-\text{SO}_3\text{H}$, $-\text{COOH}$, $-\text{PO}(\text{OH})_2$, $-\text{POH}(\text{OH})$, $-\text{Ph}(\text{OH})$ (Ph represents a phenyl group).

10. (Previously Presented) The polymer electrolyte composite membrane according to claim 8, wherein an anion-exchange group is at least one selected from a group consisting of $-\text{NH}_2$, $-\text{NHR}$, $-\text{NRR}'$, $-\text{NRR}'\text{R}''$, $-\text{NH}_3^+$ (R represents an alkyl group, cycloalkyl group, aryl group, etc.).

11. (Withdrawn) A polymer electrolyte composite membrane having a continuous phase-separated structure in which a hydrophobic moiety and a hydrophilic moiety of polymer electrolyte are parallel to a membrane thickness direction.

12. (Withdrawn) Method for manufacturing a polymer electrolyte membrane by compositing a porous base material and a polymer electrolyte comprising a hydrophobic moiety and a hydrophilic moiety, and each phase of the hydrophobic and the hydrophilic moieties of the polymer electrolyte satisfy the following formula (1)

$$a \pm b \leq d \quad (1)$$

(wherein a represents the size (nanometer) of a hydrophobic domain, b represents the size (nanometer) of a hydrophilic domain, and d represents the average pore diameter (nanometer) of fine pores of the porous base material).

13. (Withdrawn) The method for manufacturing a polymer electrolyte membrane according to claim 12, wherein the method comprising of dissolving a polymer electrolyte in solvent, impregnating a porous base material with the solution, taking out the porous base material, drying solvent, and then compositing the porous base material and the polymer electrolyte.

14. (Withdrawn) The method for manufacturing a polymer electrolyte membrane according to claim 13, wherein the method comprising of dissolving a polymer electrolyte in solvent, applying the solution on a porous base material, drying solvent, and then compositing the porous base material and the polymer electrolyte.

15. (Withdrawn) The method for manufacturing a polymer electrolyte membrane according to claim 13, wherein the method comprising of dissolving a polymer electrolyte in solvent, contacting a porous base material with the solution under reduced pressure, then returning the pressure to a normal pressure, drying solvent, and then compositing the porous base material and the polymer electrolyte.

16. (Withdrawn) A fuel cell comprising the polymer electrolyte composite membrane according to claim 1.

17. (New) The polymer electrolyte composite membrane according to claim 1, wherein a value of $a+b$ is equal to or less than 80 nanometers.